

THE ANNALS

AND

MAGAZINE OF NATURAL HISTORY.

[FOURTH SERIES.]

No. 82. OCTOBER 1874.

XXX.—*On the Genera Paradoxurus, Platyschista, and Paguma; and Notes on some Species lately received in the British Museum.* By Dr. J. E. GRAY, F.R.S. &c.

THE Musk-Weasel of Pennant and its congeners are peculiar among the Viverridæ, and indeed among the Carnivora, for having an elongate naked glandular fold of skin, the secretion of which emits a musky odour, situated on the hinder part of the abdomen, between the thighs. In the males it occupies the whole underside of the sheath of the penis, between the front of the scrotum (which is well developed and placed close to the anus) and the exit of that organ; in the females it is elongate, situated just in front of the opening of the female organ, which is placed close to the vent. This glandular structure is probably similar to the glands of the civets at the sides of the anus, but is very differently situated.

Pallas described this animal under the name *Viverra hermaphrodita*, on account of the glandular fold. Frédéric Cuvier, who had a living specimen of this animal, does not notice this peculiarity of the glandular structure of the abdomen, but establishes a genus for it; and, as the specimen which he described had the tail abnormally twisted, he called it *Paradoxurus*. Temminck truly observes that in form the tails of these genera are “ nullement caractéristiques, pas même spéci-
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figuement pour son Pougouné." But as these animals have generally the habit of curling up the tip of the tail as they lie on the ground, the tip of the tail, of those at least in confinement, has the hair more or less worn off on one of its sides. Otto some years afterwards described and figured the glandular organ on the abdomen, and formed a genus for the animal, under the name *Platyschista*.

Ogilby, Temminck, and others have described a series of semiplantigrade *Viverræ* as species of the genus *Paradoxurus*. I have formed, from differences in their dentition and the form of the skull, the genera *Puguma*, *Arctogale*, and *Nandinia* for some of the species so described; and in describing *Arctogale* I observed that the hinder part of the abdomen was like that of the other *Viverrinæ*, and without the glandular development; and lately examining the well-preserved skin of *Paradoxurus stigmaticus* of Temminck, I found that it had the hinder part of the abdomen similarly covered with hair; and on examining with care the stuffed specimens and the skins in the Museum I found that all the species of *Puguma* and *Nandinia* were equally deficient of this glandular structure. I have seen but one or two species of these animals alive, and do not recollect to have observed their tails curled at the end; nor do any of the skins show the hair partly worn off on one side of the tip, which is common in *Paradoxurus*.

The species of *Paradoxurinae* in the British Museum will therefore, after careful examination, be arranged thus:—

- I. *The hinder part of the abdomen with an elongated naked glandular fold.*

PARADOXURUS.

* *Back spotted.*

1. *Paradoxurus hermaphroditus.* India.
2. *P. nigrifrons.* India.
3. *P. fasciatus.* Java and Sumatra.
4. *P. dubius.* Java and Sumatra.

** *Back streaked.*

5. *P. philippensis.* Philippines.

*** *Back uniform grizzled.*

6. *P. bondar.* India.

II. *The hinder part of the abdomen between the thighs covered with hair, without any glandular fold.*

PAGUMA. Back uniform grizzled.

1. *Paguma zeylanica*. Ceylon.
2. *P. Crossii*. India.
3. *P. Grayii*. India, Nepal.
4. *P. Tytleri*. Andaman Islands.
5. *P. stigmatica*. Borneo.
6. *P. leucomystax*. Sumatra and Borneo.
7. *P. larvata*. China.

ARCTOGALE. Back streaked.

8. *Arctogale trivirgata*. Java and Sumatra.

NANDINIA. Back spotted.

9. *Nandinia binotata*. West Africa.

The British Museum has lately received, since the publication of the 'Catalogue,' two additional species of the genus.

In the year 1871 the Museum received from Edward Gerrard, jun., an adult specimen with its skull of a *Paradoxurus* from North Borneo, which is quite distinct from any other in the British Museum.

This species is probably the *Paradoxurus stigmaticus* of Temminck's 'Esquisses Zoologiques,' p. 120, described from a single old male specimen in the Museum of Leyden.

This species is very peculiar for its nearly uniform brown colour, with blacker head and extremities, black whiskers, and a narrow white stripe or, rather, elongated spot on the nose. The colour of the whiskers and the stripe on the nose at once distinguish it from *P. leucomystax* and *P. Tytleri*, which agree with it in being of a nearly uniform colour, but have nearly white whiskers and a dark spotless nose.

1. *Paguma stigmatica*. Black-whiskered Paguma.

Paradoxurus stigmaticus, Temminck, Esq. Zool. p. 120; Cat. Carniv. Brit. Mus. p. 76.

Fur nearly uniform rather ashy brown; whiskers elongate, black; the face, the lower lip, fore and hind feet, and the hinder half of the tail blackish or black; the middle of the nose, in front of the eyes, with an indistinct short white streak, from the pale tips to the hairs; the hair at the top of the head

and of the fore and hind legs darker, with small white tips; the middle of the throat, the chest, and underside of the body ashy; the hairs on the underside of the middle of the tail with long silver ends. Length of head and body 21 inches: tail about the same length; but it is probably lengthened, as it is very slender and has a stick inside it.

Hab. North Borneo. B.M.

The white spot, from which Temminck named the species, is very small and indistinct in the British-Museum specimen; but I suppose it is the same as his species, which comes from Borneo, and which he describes as having a "pure white longitudinal band extending from the forehead to the origin of the muffle, covering the ridge of the nose."

It is to be observed that all the plain *Paradoxuri* have a more or less distinct indication of a streak down the nose. The other parts of Temminck's description agree with what a brighter and more adult specimen of this animal would be. This species is at once known from the other *Pagumæ* by its black whiskers, whereas in almost all the other species they are white. The whiskers differ in strength in the species, being strongest in *P. leucomystax* and most slender and weakest in *P. zeylanica*. It is to be observed that though this is so characteristic, it is not mentioned in Temminck's description.

The British Museum received in 1870 the specimen of *Paradoxurus* from the Andanan Islands presented to the Zoological Society by Mr. Arthur Grote in May 1865, and said to be *Paradoxurus Tytleri* of Blyth (see P. Z. S. 1865, p. 466). As I do not know where this very distinct species is described, I send the following short note of it, as it is perfectly distinct from all the other species in the British Museum.

2. *Paguma Tytleri*.

Paradoxurus Tytleri, Blyth: P. Z. S. 1865, p. 466.

Fur rather long, not dense, pale greyish brown, with long white tips; the sides of the neck, the throat and upper parts of the body, and the insides of the limbs ashy white; the face, the sides of the lower jaw, and the fore and especially the hind feet darkish brown; the cheeks under the eye, the forehead, and a narrow line down the centre of the nose paler, with paler tips to the hairs; whiskers white, scarcely as strong as in *P. leucomystax*.

Hab. Andaman Islands. B.M.